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NEW SOUTH AFRICAN APIONINAE (COL., CURCULIONIDAE)

By J. Balfour-Browne, M.A., F.Z.S., F.R.E.S.

Dept. of Entomology, British Museum (Natural History).

Apion micans sp. n.

♂♀. Derm black, slightly metallic; antennae and legs, with the exception of the coxae, rufo-flavous; setose scales of elytral striae adpressed, of interstriae erect, white; meso-sternal episterna and epimera and metasternal epimera densely clothed with broader adpressed clear white scales; claws sharply dentate ventrally at the base.

Head as wide as long, the eyes prominent, strongly rounded; beneath moderately closely clothed with broad white scales which are continued on to the venter of the " neck "; frons as wide as the base of the rostrum, flat, with a short median shallow stria and four longitudinal rows of punctures each bearing a scale; temples about one-quarter the diameter of the eye, rugose punctate, the punctures each bearing a scale. *Rostrum* of the male about as long as the pronotum, cylindrical, stout, obsoletely dilated at the antennal insertion, otherwise approximately parallel-sided, distinctly but quite finely punctured, basally microreticulate between the punctures, apically smooth and shining, at the median third slightly rugose; very slightly but distinctly curved; near the apex ventrally flat with a few punctures; of the female as long as the head and pronotum together, cylindrical, weakly curved, more slender, particularly after the antennal insertion to the apex, sculptured similarly to that of the male but the punctures are finer and sparser towards the apex. *Antennae* rufo-flavous, inserted at about one-quarter of the length of the rostrum from the base, quite slender; scape twice as long as the basal funicular segment, which is about one and a half times as long as wide and twice as long as the second segment, third to seventh segments subequal in length but progressively broader, seventh distinctly transverse; club oval; all segments with white setae. *Pronotum* as long as wide, widest at the middle, base and apex of equal width; dorsal outline very weakly convex; with large, shallow punctures, each bearing a setose scale, the punctural interstices about equal to the diameter of the punctures, microreticulate; with a short but sharply impressed median dorsal sub-basal fovea; anterior margin with a " collar " of forward-projecting scales; anterior face of the procoxae of the male densely clothed with broad, pure white scales, of the female with narrow scales. *Scutellum* very small, semicircular. *Elytra* elliptical, widest about the middle, dorsal outline not very strongly convex, highest at middle; humeral callus distinct; striae strongly and sharply impressed, with the catenulate punctures very distinct, each space between neighbouring punctures with a small adpressed setose scale; interstriae flat, on the disc not wider than the striae, with a single row of erect setose scales; striae 1 and 2 uniting with 9 at apex; surface slightly metallic, moderately shining; elytral apices rectangular. *Venter* with regular, evenly spaced punctures each bearing a narrow setose scale but those of the metasternum and sides of apparent basal ventrite broader, more scale-like. *Legs* rufo-flavous, slender but short; metafemora not nearly attaining the apex of the abdomen; male with an interno-apical spur on the four posterior tibiae; apparent fourth tarsal segment of the four posterior tarsi short, not, or barely longer than the proximal segment; claws black, finely but distinctly dentate at the base beneath; all femora and tibiae clothed with white setae.

Length: 1·9–2·3 mm. (*sine rostro*).

Holotype ♂, Cape Province: Mossel Bay, x.1921; *Allotype* ♀, same particulars; *Paratypes*, 4 ♂♂, 2 ♀♀, same particulars; 4 ♂♂, same locality, vi.1924.[1]

This little species appears to belong to the subgenus *Phrissotrichum* Schilsky by the presence of erect scales in the interstriae and recumbent scales in the striae, but the rostrum is weakly but distinctly curved and not markedly elongate as in *tubiferum* Gyll., the subgenotype. The flavous legs and unilinear interstrial scales place the new species near *A. crinitum* Wagn., which must also be included in the subgenus. The new species may be distinguished by the entirely black rostrum of the male, the shorter strial scales, the shorter and curved interstrial scales and by the distinctly reticulate interspaces between the thoracic punctures.

Apion rubiginosum sp. n.

♂♀. Derm testaceous, antennae and legs flavo-testaceous; scales of the elytral striae adpressed, of the interstriae erect with the apex recurved, cream-coloured; scales of the legs porrect; venter not densely but rather sparingly clothed with white scales; claws stout with a large blunt ventral basal tooth.

Head as wide as long, the eyes not very prominent, flatly rounded; beneath the eyes with rather copious cream scales; frons as wide as the base of the rostrum, flat, shining with two rows of fine punctures on either side of the middle line, each puncture bearing a porrect, curved, cream scale; each margin against the eye with closely set punctures, each bearing a cream scale; temples linear; surface shining, non-reticulate. *Rostrum* of the male as long as the pronotum alone, of the female as long as the head and pronotum together, fairly stout, weakly arcuate, parallel-sided and of equal width throughout, with a few fine and scattered punctures; shining and non-reticulate between the punctures; at each side from the base to the antennal insertion a few stronger punctures, each bearing a scale, are aggregated into an impressed line and the admedian rows of punctures of the frons continue on to the base of the rostrum up to about the antennal insertion. *Antennae* rather short, inserted at one-quarter of the length of the rostrum from the base; scape rather elongate, about as long as the first four segments of the funicle taken together, slender; basal segment of the funicle twice as long as wide and twice as long as the second segment, third to seventh segments progressively broader; club ovoid, about as long as wide at the basal segment, which is the widest. *Pronotum* as long as wide, widest at the base, the sides almost straight, gradually attenuate to the apex, which is about two-thirds the width of the base; dorsal outline very weakly convex; rather strongly but evenly punctured, the punctures separated from each other by a space about equal to half the diameter of the punctures, the surface sub-shining, very finely obsoletely microreticulate; each puncture bearing a curved semi-procumbent cream-coloured scale; sub-apical constriction obsolete; no dorsal sub-basal fovea, at the most only a shallow, barely discernible depression in the normal position of the fovea. *Scutellum* short, oval, about one and one-half times longer than wide at the base. *Elytra* elliptical, widest at middle; dorsal outline strongly convex; highest at middle, the posterior declivity steep; humeral callus distinct; striae strongly impressed, catenulate punctate, each space between neighbouring punctures with an adpressed setose scale; interstriae convex, about one and one-half times wider than the striae on the disc, with a single row of porrect, curved cream-coloured scales; the suture behind the scutellum with a short patch of procumbent white scales; stria 1 uniting with 9 at apex; apices rectangular, not rounded. *Venter*, particularly metasternum and apparent first and second ventrites, strongly punctured, the punctures separated by about half their diameters, each bearing a narrow curved white scale. *Legs* rather short, the hind femora not quite reaching the

[1] The collector, in all cases, for the species described in this paper is R. E. Turner and all the material is in the British Museum (Natural History).

apex of the body, flavo-testaceous, clothed with straight, porrect, spatulate white scales; claws black with a strong blunt basal ventral tooth; middle and hind tibiae of the male unarmed at the interno-apical angle.

Length: 1·83–2·07 mm. (*sine rostro*).

Holotype ♂, PONDOLAND: Port St. John, 12–30.vi.1923; *Allotype* ♀, same locality, 1–9.vii.1923; *Paratypes*, 1 ♂, 6 ♀♀, same locality, 12–30.vi.1923 (2); 1–9.vii.1923 (2); 10–31.vii.1923 (1); 15–31.v.1923 (1); x.1923 (1).

This species is rather similar superficially to *A. russeolum* Gyll. but may be immediately distinguished by the porrect unilinear scales of the interstriae and the shining interstices of the head and rostrum. Except for *A. crinitum* Wagn. and *A. micans* sp. n., I know of no related species and they may be distinguished from *rubiginosum* by the black colour of the derm and the dense white clothing of the thoracic venter. This species must be included also in the subgenus *Phrissotrichum* Schilsky on the character of the scales of the elytra, but as in the two other South African species the rostrum is not markedly elongate and is distinctly if weakly curved.

Apion baccatum sp. n.

♂♀. Derm black, shining; antennae fusco-rufous, the club rufous; legs with the femur and tibia rufous, the trochanter and tarsi rufo-fuscous and the coxae black; scales adpressed, lanceolate, short, of a pearly lustre, in a single row in the striae, irregularly bilinear on the interstriae, densely set on the thoracic venter; claws short, with a short blunt basal tooth.

Head about as long as wide, the eyes not prominent, flatly rounded; frons as wide as the base of the rostrum, flat, with obsolete longitudinal strioles, finely microreticulate with two longitudinal series of scale-bearing punctures on either side of the middle line and irregular scale-bearing punctures along the eye margin; temples extremely short; the eyes fringed with scales. *Rostrum* in the male shorter than the head and pronotum together, parallel-sided to the antennal insertion, then abruptly narrowed and thence parallel-sided to the apex; basally finely microreticulate and vaguely linear punctate, apically smooth and shining with very fine scattered punctules; black to the antennal insertion, thence rufescent to the apex, which is fusco-rufous; in the female as long as the head and pronotum together, the apex about two-thirds the width of the base, regularly attenuate from base to apex; basally reticulate, with scattered punctures, progressively more finely punctate towards the apex, the reticulations not extending farther than the antennal insertion, black throughout. *Antennae* rather short in the male, the scape not longer than the first and second segments of the funicle taken together, in the female longer, the scape as long as the first three segments of the funicle taken together, the club in both sexes rufous, oval, the funicular segments barely wider at the apex than at the base. *Pronotum* a little longer than wide, widest at the base, approximately parallel-sided from the base to the middle, thence attenuate to the ante-apical constriction which is fairly well marked; dorsal outline weakly convex; base obsoletely bisinuate; punctuation fairly dense and well-impressed, the interstices obsoletely microreticulate; a deep median sub-basal dorsal fovea; the surface well clothed with lanceolate pearly-lustred scales. *Scutellum* very small, rounded. *Elytra* about twice as long as wide at the base; the humeral callus distinct but not prominent; the sides subparallel to about the middle, thence evenly attenuate to the apex; dorsal convexity even and moderate; the striae sharply but not deeply impressed, the strial punctures markedly catenulate, the intervening area about the diameter of the punctures and with a single elongate-oval scale to each; interstriae almost flat, about one and a half times the width of the striae on the disc, the first, third, fourth and eighth irregularly bilinear, the second, fifth, sixth and seventh irregularly trilinear, the sutural

with a single row of elongate-oval scales; the apex of the elytra of the male more evenly and largely rounded than in the female. *Venter* black, densely and evenly clothed with rather bat-shaped scales, particularly so on the meso- and metathoracic segments. *Legs* rather short but slender, the hind femora not attaining the elytral apices; the coxae black, trochanter and tarsi rufo-fuscous, the femur and tibia rufous, clothed with narrow elongate white scales; the claws black, with short basal ventral tooth; the four hind tibiae of the male with stout black interno-apical spur.

Length: 1·97–2·37 mm. (*sine rostro*).

Holotype ♂, South-West Africa: Aus, xii.1929; *Allotype* ♀, same locality, 8–30.xi.1929; *Paratypes*, 2 ♀♀, same particulars as allotype ♀; South Africa: 1 ♂, 1 ♀, Camps Bay, Cape Peninsula, ix.1920; 1 ♀, Lion's Head, Capetown, 2–11.vi.1920; 1 ♀, Mossel Bay, Cape Province, x.1921; 1 ♀, Cape Province, Ceres, ii.1925; Natal: 1 ♂, Van Reenen, Drakensberg, xii.1926.

The exact relationships of this species are not clear. It appears to have certain features in common with the *A. montivagum* Wagn. and *A. arrowi* Wagn. group except for the black derm and it also appears to have some connection with *A. squamulatum* Gyll. There are other species related to *baccatum* in Turner's material from South Africa which have yet to be worked out and the nearest related species may possibly be found among these.

Apion turneri sp. n.

♂♀. Derm rufo-testaceous, the base of the rostrum and the coxae pitchy; surface with opalescent or nacreous short oval scales, only the rostrum from the antennal insertion to the apex and a transverse band on the disc of the elytra without scales.

This species is so extremely similar to *A. montivagum* Wagn. from Table Mountain, that a separate description seems to be unnecessary. The pronotum is narrower and slightly more distinctly longer than wide, the elytra are more elongate, laterally more distinctly rounded and the humeral callus a little more distinctly prominent, but in one female of the series the callus is quite undeveloped, the sides of the elytra evenly wider from the base to the median widest part. The form is more that of *A. arrowi* Wagn., also from the Cape Province, but the pronotum is narrower and the scaled area of the elytra is much more extensive. The new species is almost exactly intermediate in size between the two compared species and it was not until males of each had been dissected that it could be said with certainty that there was a third member of this remarkable group. The aedeagus of a co-type of *montivagum* (fig. 1, c) is rather strongly curved, almost the same width throughout and the apex rounded smoothly; that of *turneri* is much less curved, much broader, nearly parallel-sided for four-fifths of the length, thence evenly attenuate to a sharply rounded apex (fig. 1, b), the whole organ nearly twice as stout as that of *montivagum*; that of *arrowi* is about as wide as that of *turneri*, more strongly curved and the apical attenuation is less pronounced, the apex being much more bluntly rounded (fig. 1, a).

Length: 2·13–2·27 mm. (*sine rostro*).

Holotype ♂, Cape Province: Mossel Bay, viii.1930; *Allotype* ♀, same locality, ix.1921; *Paratypes*, 2 ♂♂, 3 ♀♀, same data as allotype ♀.

Apion rubellum sp. n.

♂♀. Derm reddish-testaceous throughout; clothing of short adpressed cream-white lanceolate scales in a loose pattern, with an elongate patch of conspicuously white scales along the suture behind the scutellum; rostrum distinctly curved; claws simple; legs short.

Head distinctly wider than long (2·0 : 1·3), the eyes very prominent; the surface strongly and closely punctured, each puncture giving rise to a curved lanceolate cream-coloured scale, the eye-margin scales more distinct; punctural interstices microreticulate; beneath the eye in both sexes heavily scaled. *Rostrum* of the male as long as the pronotum, of the female as long as the head and pronotum taken together, moderately stout and of even width throughout, as wide as the frons, finely and evenly but sparingly punctured, at the base up to the antennal insertion microreticulate, the punctures here each bearing a

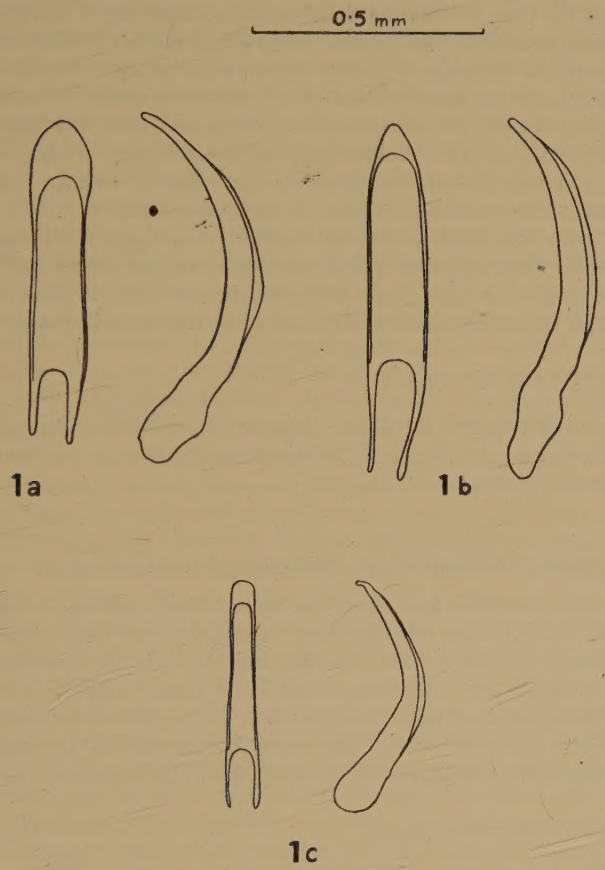

FIG. 1.—Ventral and lateral views of the aedeagus of (a) *Apion arrowi* Wagn.; (b) *A. turneri* sp. n.; (c) *A. montivagum* Wagn.

cream-coloured scale, apically smooth and shining; baso-laterally with an impressed row of punctures. *Antennae* inserted at about one-third of the length from the base of the rostrum in the male, one-quarter in the female, the scape as long as the four basal segments of the funicle taken together, the proximal funicular segment oval, nearly one-quarter the length of the scape, barely wider than the second segment which is about half its length; third to seventh segments progressively shorter; club ovoid. *Pronotum* shorter than wide, widest at the base, the sides weakly curved, the sub-apical constriction obsolete; closely, as strongly as the head, and evenly punctured, the interstices of the punctuation micro-reticulate; median dorsal sub-basal fovea obsolete; each puncture bearing a cream-white, narrowly lanceolate curved scale-hair; dorsal outline weakly convex; the anterior margin

with a close-set fringe of narrow scales; apex rather less than two-thirds the width of the base. *Scutellum* twice as long as wide, parallel-sided, dorsally obsoletely longitudinally grooved, the apex rounded, surface microreticulate. *Elytra* ovoid, humeral callus well developed; sides to the middle sub-parallel, thence to the apex evenly attenuate; apices rounded-rectangular in both sexes; strongly and deeply striate, the striae sharply punctured, each puncture separated from its neighbours by a space about equal to its diameter which bears a short oval cream-white scale; striae 1 and 2 uniting with 9 at apex; interstriae flat, little wider than the striae, with short, lanceolate cream-white scales in an irregular loose pattern, unilinear at the base, trilinear on the disc, not grouped into a conspicuous tuft at the base of the third interstria; the sutural margin immediately behind the scutellum with an elongate patch of conspicuously white scales, followed by a bare patch of about equal length which attains the highest point of the anterior-posterior convexity; highly convex, the convexity regular in both anterior-posterior and transverse planes. *Venter* coarsely punctured, each puncture scaliferous; the anterior face of the procoxae, the mesosternal epimera and the metasternal episterna more densely clothed. *Legs* short and stout, the hind femora not exceeding the base of the apparent fifth ventrite; middle and hind tibiae of the male without an interno-apical spur; second and third segments of the tarsus not longer than wide, apparent fourth segment short, not longer than the second and third segments taken together; claws black, simple and without basal ventral tooth; legs well clothed with narrow spatulate white scales; the interno-apical setae of the tibiae smoky-gold.

Length: 2·13–2·46 mm. (*sine rostro*).

Holotype ♂, South-West Africa: Aus, 8–30.xi.1929; *Allotype* ♀, same particulars; *Paratypes*, 4 ♂♂, 1 ♀, same particulars; 1 ♀, same locality, xii.1929; 1 ♂, same locality, i.1930.

Apion rubellum subsp. **fuscomarginatum** subsp. n.

South African material differs from the South-West African material in having the dorsum of the rostrum in both sexes very distinctly reticulate at the base, obsoletely so, but usually quite distinctly, beyond the antennal insertion which in the material from Aus is quite smooth and shining; the elytral suture and entire venter is darker in material from South Africa, but the aedeagus of both forms has been compared and the above differences do not appear to have a specific value. The South African material is regarded as being no more than a geographical subspecies of *rubellum*, for which the name *fuscomarginatum* is proposed.

Length: 1·96–2·23 mm. (*sine rostro*).

Holotype ♂, South Africa: Cape Province, Worcester, ix.1928; *Allotype* ♀, same particulars; *Paratypes*, Cape Province, Mossel Bay, 8 specimens, x.1921; 1–14.xi.1921; 18–30.xi.1921; xii.1921; i.1922; ii.1922; Milnerton, 2 specimens, 14–28.xii.1925; 1 specimen, i.1926; Worcester, 3 specimens, ix.1928; 1 specimen, 17–31.viii.1928.

This little species, and particularly its subspecies, are very closely related to *tropicum* Htm. (*vide* Balfour-Browne, 1944, *Ann. Mag. nat. Hist.* (11) **11**: 135) and only separable with difficulty therefrom. The conspicuous patch of white scales behind the scutellum, the broader and more abruptly impressed elytral striae with the punctures therein larger and deeper, the flat interstriae, the broader frons—quite as wide as the base of the rostrum—and the more finely punctured apical half of the rostrum serve to distinguish the new species and its subspecies from *tropicum*.

Apion johannis sp. n.

♂♀. Derm testaceous, the elytral suture and basal two-thirds of the side margins somewhat fuscous; the legs and apex of the rostrum of the male rufo-flavous or flavous, the apex of the femora infuscate; eyes moderately prominent; scutellum elongate; claws distinctly toothed at base ventrally; margins of the ventral sclerites infuscate.

Head slightly wider than long, eyes moderately prominent, temples very short; frons about two-thirds of the width of the base of the rostrum, flat, reticulate, with a pair of irregular linear series of strong punctures on either side of the middle line and the usual circumorbital punctures, each bearing a whitish-golden hair-like scale; the sides of the head below the eyes densely clothed with similar scales. *Rostrum* of the male as long as the pronotum, of the female very slightly longer, stout, cylindrical, curved; dorsally more finely and sparingly, laterally decidedly more coarsely and copiously (and vaguely linearly) punctate, the punctures not diminishing towards the apex; distinctly reticulate at the base, fading out about the middle of the length, the apex smooth and shining; the frontal series of punctures extending over the base of the rostrum to about the antennal insertion and bearing hair scales; the punctures of the apical half of the rostrum bearing short and fine but quite distinct hairs; of the male rufo-flavous or flavous from the antennal insertion to the apex, of the female testaceous throughout. *Antennae* of the male inserted at one-quarter, of the female at one-third, of the length from the base of the rostrum, flavo-testaceous, short but slender; the scape twice in the male, two and a half times in the female, longer than the proximal segment of the funicle, which is twice as long as wide; third to seventh segments progressively shorter; club fusiform. *Pronotum* a little wider than long, widest at the base, the sides nearly straight, in form a truncate cone; dorsal outline weakly convex; finely and sparingly punctured, distinctly microreticulate; each puncture bearing an elongate lanceolate whitish-gold scale, the punctures absent from a narrow medio-dorsal line running the whole length of the pronotum; anterior margin with adpressed lanceolate scales, basal margin with anteriorly directed elongate lanceolate scales set rather closer together than the general surface scales. *Scutellum* elongate, parallel-sided, apex rounded, surface rather evidently convex. *Elytra* short oval, distinctly striate, the interstriae one and a half times wider than the striae, convex; the striae catenate punctate; the interstriae basally and apically uniseriate, discally biseriately set with fine punctures bearing an elongate-lanceolate whitish scale, the base of the second interstria with a conspicuous tuft of lanceolate scales; humeral callus not very pronounced; dorsal outline evenly but not highly convex; the seventh, eighth and ninth striae are obsoletely striate about the middle, more seriate punctate; first stria uniting with ninth at apex, second with seventh and eighth. *Venter*: epimera and episterna of mesosternum and metasternal episterna rather densely clothed with white hair scales; metasternum very finely, apparent first and second ventrites more coarsely punctured but not copiously so; fifth sternite flavous. *Legs* moderately long and slender, hind femora not quite reaching the apex of the abdomen; flavous, the apices of the femora slightly infuscate; tarsal segments short and broad, the first and fifth subequal, the second as long as wide; claws strong, sharply and distinctly but not strongly dentate at the base beneath; four hind tibiae of the male simple, not produced into a stout interno-apical spur.

Length: 1·46–1·97 mm. (*sine rostro*).

Holotype ♂, PONDOLAND: Port St. John, 5–30.iv.1923; *Allotype* ♀, same particulars; *Paratypes*, 8 ♂♂, 6 ♀♀, same particulars; 2 ♂♂, 6 ♀♀, same locality, 1–11.vi.1923; 1 ♂, 3 ♀♀, same locality, 12–30.vi.1923; 2 ♂♂, 1 ♀, same locality, 1–9.vii.1923; 1 ♂, 4 ♀♀, same locality, 15–31.viii.1923; 2 ♂♂, same locality, ix.1923; 1 ♂, same locality, x.1923; 1 ♀, same locality, 1–17.iii.1924; ZULULAND: Eshowe, 1 ♂, 5 ♀♀, iv.1926.

This little species belongs to the *verulamense–striaticeps* group and is very close to those species, but is easily recognised by the stouter rostrum, the rather more prominent eyes, the shorter broader pronotum without distinct sub-basal and sub-apical constrictions, the finer elytral striae and the infuscate apices of the femora; the clothing is of equal density over the whole elytron, not markedly shorter and finer in a deep V-shaped mark from the humeri to the disc.

Apion setulosum Beg.-Billc.

Apion setulosum Beg.-Billc., 1905, *Ann. Soc. ent. France* **74** : 146. (Madagascar.)
Apion penicillatum var. *basipenne* Mshl., 1932, *Stylops* **1** : 4. (South Africa.) **Syn. nov.**

Whilst re-arranging the *Apion* in the British Museum (N.H.) a male of *setulosum* was found bearing a co-type label and " *Apion setulosum* Beg. Billc.

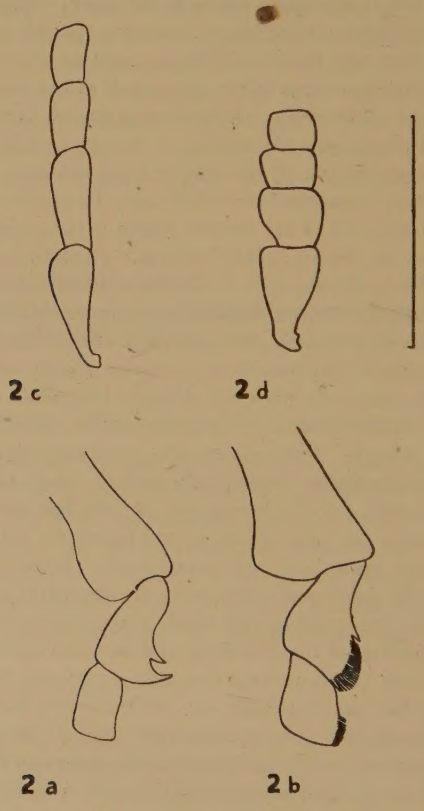

Fig. 2.—Apex of hind tibia and two basal segments of the tarsus of the male, lateral, (a) *Apion setulosum* Beg.-Billc.; (b) *A. penicillatum* Mshl. Scape and three basal segments of the funicle of the antenna of the female, (c) *setulosum* Beg.-Billc.; (d) *A. penicillatum* Mshl.

ex typis " in handwriting I do not know. This specimen agrees exactly with the original description and there is no reason to doubt the authenticity of the co-type label. It was at once apparent that *A. penicillatum* var. *basipenne* Mshl. was conspecific and a further examination of the original material of *penicillatum* Mshl. and the var. *leptorrhinum* Mshl. suggests that these two forms

are to be treated as specifically distinct from *setulosum*, although extremely closely related thereto. The differences are summarised thus :—

setulosum	*penicillatum*
♂. Basal segment of the hind tarsus (fig. 2, a) deeper at apex, produced into a strong ventral hook with an immediately anterior spine of equal size; spongy area very small; rostrum stouter.	♂. Basal segment of the hind tarsus (fig 2, b) not particularly deep at apex, not produced into a strong hook; three to four short ventral spines from the middle; spongy area larger; rostrum more slender.
♀. Rostrum longer (2·07); antennal segments longer than wide (fig. 2, c).	♀. Rostrum shorter (1·1); antennal segments not longer than wide (fig. 2, d).

The presence of this Madagascan species in South Africa (and I have also examined three females from KENYA : Arabuko Forest, Malindi, v.40 (*T. H. E. Jackson* collector) and one female from TANGANYIKA : Lulanguru, 13.xii.1917, 17 m. W. of Tabora, 3766 ft., Wet season from end Nov. (*G. D. Hale Carpenter* collector)) is of considerable interest. The material available is not sufficient for dissections to be made to confirm this treatment in view of the likelihood of the abrasion of the fasciae, but the much longer or shorter rostrum and antennal segments of the females and the consistent differences in the basal segment of the hind tarsus of the males are characters normally indicating specific differences within the genus and can be relied upon in the present instance without much doubt.

Apion capense sp. n.

♂♀. Derm black, moderately shining, surface clothing extremely scanty and very short and fine; head beneath the eyes with a broad transverse projecting plate with truncate apex, visible in lateral view as a sharp backward projecting tooth; internal and external elytral striae deeply and sharply impressed at the apex; legs not very elongate, tarsi short and rather broad; claws dentate at base beneath.

Head a little longer than wide (1·6 : 1·3), the eyes not prominent, flatly rounded, the temples short, about one-third the diameter of the eye, the vertex transversely shallowly constricted; frons slightly narrower than the base of the rostrum, flat, distinctly microreticulate but not dull, with a few very fine punctules; head beneath strongly microreticulate and quite dull with, posteriorly (in line with the posterior margin of the eye), a broad, flat, apically truncate plate, directed postero-ventrally, with free apex which appears like a sharp tooth in lateral view. *Rostrum* longer than pronotum but not as long as the head and pronotum together, slender, curved, cylindrical, parallel-sided from the base to the antennal insertion, thence very slightly attenuate to the apex, basally microreticulate, apically shining and smooth with distinct punctures which are coarser laterally; basi-lateral sulcus very obsolete but a fine ridge extends from the antennal insertion to the middle of the front margin of the eye; the space between the antennal insertion and the eye slightly greater than the diameter of the eye. *Antennae* fusco-testaceous, rather elongate and very slender, the scape short, not longer than the basal segment of the funicle which is, itself, not longer than the second segment, fourth to seventh segments progressively shorter but the seventh segment still elongate, twice as long as wide; club elongate oval, widest at middle segment, which is as long as the conical proximal segment. *Pronotum* as long as wide, sub-basal and sub-apical constrictions well marked, as wide at the middle as at base, apex five-sevenths the width of the base; dorsal outline moderately convex; distinctly microreticulate, not dull, sparingly and rather obsoletely punctured on the disc, barely visibly setiferous, without trace of a median dorsal sub-basal fovea. *Scutellum* extremely small, oval, slightly inflated.

Elytra ovate, sides evenly rounded; dorsal convexity strong, highest at middle, the convexity nearly regular; humeral callus distinct; distinctly striate, those of the disc more strongly impressed, those laterally rather shallowly impressed, first, second and ninth particularly strongly and deeply incised at apex where they unite; all striae catenate punctate, the punctures shallow; interstriae flat, three times as wide as the striae, obsoletely microreticulate but rather dull, with sparse very fine punctures, each bearing an excessively short fine hair; apices of the male rounded, of the female sharply rectangularly produced. *Venter* black, distinctly microreticulate, very obsoletely punctate; fifth ventrite of the male obscurely rugose, dull; of the female shining, obsoletely foveate or depressed in the middle. *Legs* quite short, hind femora barely exceeding the base of the apparent fifth ventrite, slender; hind tibiae slightly longer than the femur; tarsi rather short and broad, second segment of the four hind tarsi not longer than wide; distal segment shorter, or not longer than the proximal segment; claws with a short, obtusely pointed tooth at the base beneath.

Length: 2·20–2·37 mm. (*sine rostro*).

Holotype ♂, Camps Bay, Cape Peninsula, 1–20.x.1920; *Allotype* ♀, same particulars; *Paratypes*, 2 ♂♂, Cape Province, Swellendam, 17.xii.31–17.i.32; 3 ♀♀, Camps Bay, Cape Peninsula, 1–20.x.1920; 1 ♀, same locality, ix.1920.

This species is almost in the subgenus *Conapion*, but the elytral convexity is less great and not keel-shaped transversely; the presence of the peculiar ventral process of the head is not paralleled in any African species known to me, but it is found in *A. elegantulum* Germ. from Southern Europe and South-East Asia. *A. capense* does not appear to have any relationship with that species group and must stand as an isolated species for the time being.

A NEW SUBSPECIES OF *AËDES LEESONI* EDWARDS (DIPT., CULICIDAE) FROM THE SUDAN

By D. J. Lewis, M.A., F.R.E.S.

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Aëdes (Aëdimorphus) leesoni Edwards, 1932, subsp. **verna** subsp. n.

♀. *Head* with all decumbent scales on vertex narrow and nearly all pale. Proboscis uniformly dark above and below. Palpi dark. Tori dark anteriorly and pale above, almost bare. *Thorax* mainly dark brown. Scutum with many narrow dark scales and a few small areas of narrow scales, no broad scales on each side of the pre-scutellar space; scutellum with pale scales, those on median lobe narrow; some, usually most, of those on lateral lobes narrow, some intermediate and occasionally a few broad; scales on *a p n* narrow and on *p p n* nearly all narrow; paratergite with narrow and intermediate scales. About 10 post-spiracular and 20 sub-spiracular scales. *Abdominal* tergites with basal pale bands; sternites with dark apical bands. *Legs* mainly dark; hind femur dark all round for a short distance before tip, pale knee spot very small; pale spot at tip of hind tibia about as long as broad.

♂. Resembles ♀ in general but has dark tori and fewer post-spiracular scales. Palpi exceeding proboscis by length of last segment. Scales on *a p n* and *p p n* mostly narrow, some intermediate. Paratergite with broad and intermediate scales. *Terminalia* (fig. 1) closely resembling those of *A. leesoni* but distal horn of style much longer than projection at its base; distal spines 5 to 7 in number, spatulate, that on pubescent portion of style appearing pointed owing to its position; pubescent projection shaped as in *A. wigglesworthi* Edw., 1941.

Wing length: 3·1–3·8 mm.

Pupa. Integument mainly pale but with dark areas on posterior part of dorsum of thorax and on coxal area, trumpet pale except at tip. Dorsal seta divided near base into about 10 delicate branches; O and R divided very near base into about 8 delicate branches. Float hair pale; K long and pale; M a small dense tuft; S longer than K, branched; T about same length as K, branched. C-II a pale multiple tuft longer than its segment, C-III pale, half as long as its segment; C-IV and V pale with 4–7 branches, half as long as their segments. B-III single; B-IV–VI double, longer than their segments; B-VII weak, shorter than its segment. A-VII with 24 branches; A-VIII with about 13 plumose branches, situated anteriorly to the corner by $\frac{1}{7}$ of length of segment. Paddles broad and bluntly pointed as in *A. wigglesworthi*, margin smooth, seta minute, bifid or trifid.

Larva. Head distinctly broader than long. Antennae almost as long as head, spiculate, infuscated on distal half; tuft of about 9 branches at $\frac{2}{5}$; terminal and sub-terminal setae placed together at apex, the latter seta $\frac{1}{6}$ length of shaft; papilla on a cylinder of chitin shorter than diameter of shaft. A, B and C plumose, their bases and that of *d* almost in a straight line; A with about 6 branches, B 3-branched and C 4-branched, *d* minute, *e* and *f* with 4 branches. *Abdomen* (fig. 1): comb of about 20 scales. Siphon pale except for basal ring, index 4·3; anteriorly near base it narrows steeply to basal ring; pecten extending to about $\frac{1}{2}$ and consisting of about 21 spines of which the most distal 1 or 2 are wider spaced; most spines dark with one basal denticle, last 1 or 2 pale, last one simple; subventral tuft very small, with about 5 branches, placed at about $\frac{2}{3}$. Anal segment with an

FIG. 1.—*Aëdes leesoni* subsp. *verna* subsp. n.: a, terminalia of ♂; b, eighth and ninth abdominal segments of larva; c, base of a tuft of ventral brush of larva.

incomplete saddle, a few spicules near posterior margin; upper caudal seta with about 15 branches, as long as saddle, lower single, lateral seta small, branched. Ventral brush with six pairs of many branched tufts in the barred area and one unpaired tuft proximal to it, tufts with unusually wide bases. Gills lanceolate, longer than saddle, subequal.

Anglo-Egyptian Sudan: Blue Nile Province, Danagla Forest, near Wad Medani, 22.viii.43 (*D.J.L.*), 1 ♀ (type) with its larval and pupal pelts (paedotypes), 3 ♂♂ (paratypes), all bred from early stages from newly-flooded swamp. Wad Medani, 11 & 12.ix.43, 7 ♂♂, 3 ♀♀ (paratypes), caught as adults. It is intended to send the type and some paratypes to the British Museum and other paratypes to the London School of Hygiene and Tropical Medicine.

From the type form, *A. leesoni*, the subspecies differs chiefly in the predominance of narrow scales on the scutellum, *a p n* and *p p n*, and in the form of the style of the ♂. In Edwards's (1941) key *A. l. verna* would run to section 25, differing from the indicated species in having narrow and intermediate scales on *p p n*. In the key to larvae of *Aëdes* given by Hopkins (1938) the subspecies would run to section 41, differing from the indicated species in having antennae slightly shorter than the head.

The larva from Heiban in the Nuba mountains referred to by Lewis (1943 : table I) as *Aëdes* sp. is apparently *A. l. verna*. Specimens were obtained five times in May and June (twice with *A. hirsutus* Theo.) in domestic water jars (*A. A. Bereir*) to which they may have been transported. Another larva was obtained, with *A. hirsutus*, in a pool at Kadugli in May (*H. Ali*). Three young larvae from Kerripi, Equatoria Province (26.iv.43, *Nur El Huda*), appear to be *A. l. verna*. Unlike several other species of the subgenus *Aëdimorphus*, *A. l. verna* has only been found in the early part of the rainy season.

Hundreds of males were seen in herbage under trees at Wad Medani on 11.ix.43. When flying they were seen to be sensitive to the sound of the human voice, rising sharply in the air and momentarily increasing their humming. Females bit before sunset.

References.

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Hopkins, G. H. E., 1936, *Mosquitoes of the Ethiopian Region I.* London, British Museum.

Lewis, D. J., 1943, Mosquitoes in relation to yellow fever in the Nuba Mountains. *Ann. Trop. Med. Parasit.* **37** : 65–76.

NOTES ON THE NOMENCLATURE OF SOME BRITISH PARASITIC HYMENOPTERA

By W. D. Hincks, M.P.S., F.R.E.S.

The following notes were made during an examination of the generic names used in several families of parasitic Hymenoptera, in connection with the preparation of a list of Hymenoptera for a *Check List of British Insects* on which Mr. G. S. Kloet and I have been working for some time. Their publication is necessary in order to explain certain synonymy adopted in this List. I have restricted the present notes to those questions which require annotation. Other synonymical matters which perhaps may be new to British workers though not new in themselves are included in the actual List. Besides these, there remain other questions not considered either here or in the List because vital data were not available. In any case it has not been the function of the present writer to attempt to revise the whole generic nomenclature of this great section of one of our largest Orders. However, in the pursuit of a fixed plan of procedure in the preparation of the Hymenoptera section of the *Check List* some inconsistencies have been discovered and these I have endeavoured to resolve.

The International Commission on Zoological Nomenclature have placed a small number of names in the parasitic Hymenoptera on the *Official List of Generic Names* by their action at Lisbon, approved and adopted by the Twelfth International Congress of Zoology in 1935, and published in the *Compte Rendu* of the Congress (1936 : 181–196). Full details of this important step are to be found in the new official organ of the Commission (1943, *Bull. zool. Nomencl.* **1** : 27–30).

There are several other instances in which action by the International Commission seems desirable, and a few such instances are referred to below. It is not my intention to make any applications to the Commission for suspensions of the rules at the present juncture, but rather I wish to draw the attention of Hymenopterists to these questions so that they may be thoroughly discussed before any action is taken.

There remain a certain number of other names which are preoccupied or incorrect in other ways, and have no claim to be preserved by the International Commission under their plenary powers. These names are dealt with here.

I am personally indebted to the Secretary of the International Commission, Mr. Francis Hemming, C.M.G., C.B.E., for much help in my work. I have to thank him for reading the manuscript of the present paper and for making valuable suggestions which I have followed. I must also express my indebtedness to the excellent publications of Henry L. Viereck (see Bibliography).

In view of the controversial nature of nomenclatorial work when unaccompanied by taxonomic evidence, I wish to state that I am entirely responsible for the conclusions which follow hereafter.

Braconidae.

I have already published five short papers on the nomenclature of the Braconidae and Aphidiidae (Hincks, 1943a, b, c, 1944a, b), so that the following notes represent merely a supplement to this previous work.

1. *Coeloides* Wesmael, 1838, *N. Mém. Acad. roy. Bruxelles* **11** : 59.

Coeloidina Viereck, 1921, *Proc. U.S. national Museum* **59**, no. 2364 : 133.

I have already (1943, *Entomologist* **76** : 97) given a short note on this genus based on the data recorded by Viereck (1914, 1921) and I there adopted the synonymy *Coeloidina* Viereck (= *Coeloides* Wesmael, *partim*).

Dr. Roy D. Shenefelt (1943) has just published a most interesting and valuable revision of the North American representatives of the genus *Atanycolus* Foerster, 1862. In this paper he examines fully the nomenclature of *Atanycolus* Foerster, 1862, *Coeloides* Wesmael, 1838, and *Coeloidina* Viereck, 1921. It is evident from the data which he records that the name *Coeloidina* Viereck is a redundant synonym of *Coeloides* Wesmael. Wesmael misidentified *Ichneumon initiator* Fabricius, 1793, a species actually belonging to *Atanycolus*, where it is so placed by Fahringer (1925) as *A. initiator* Nees. The Wesmaelian insect was renamed by Wesmael himself as *Coeloides scolyticida* Wesmael, 1838, and Shenefelt correctly regards this as the genotype of *Coeloides*. The type of *Coeloidina* Viereck is the congeneric *Coeloides melanotus* Wesmael, 1838, and thus Viereck's name is superfluous.

2. **Dolopsidea** nom. nov. pro *Dolops* Marshall, 1889, *Trans. ent. Soc. Lond.* **1889** : 206, *nec* Audouin, 1837, *nec* Agassiz, 1846.

Recently (1943, *Entomologist* **76** : 101), in discussing the genus *Dolops* Marshall, 1889, I decided that it would not be necessary to alter this preoccupied name since *Dolops* Audouin, 1837, appears to be a *nomen nudum* and *Dolops* Agassiz, 1846, is only an emendation of *Doliops* Waterhouse, 1841.

The appearance (26 Oct. 1943) of *Opinion* 148 of the International Commission on Zoological Nomenclature has clarified the position regarding the interpretation of Articles 25 and 34 of the International Code as far as they concern generic names. Since it is ruled that " (2) A generic name is to be rejected as a homonym if it has previously been published as an emendation of another generic name of earlier date " it becomes necessary to propose a new name for Marshall's genus. I therefore propose *Dolopsidea* as a new name for *Dolops* Marshall, 1889, *Trans. ent. Soc. Lond.* **1889** : 206, *nec* Audouin, 1837, *nec* Agassiz, 1846.

The genotype is *Dolops hastifer* Marshall, 1889, by designation of Viereck (1914, *Bull. U.S. nat. Mus.* **83** : 48).

3. *Dapsilarthra* Foerster, 1862, *Verh. naturh. Ver. Rheinl.* **19** : 267.

Adelura Foerster, 1862, *loc. cit.* : 267, *nec* Bonaparte, 1854.
Adelurola Strand, E., 1928, *Arch. Naturgesch.* 1926, **92**, A8 : 51.

Adelura Foerster, 1862, is preoccupied by Bonaparte's Avian genus published in 1854. In 1928 Dr. Embrik Strand proposed the new name *Adelurola* for that of Foerster, evidently overlooking the fact that certain Foersterian synonyms of *Adelura* were available. Of these *Dapsilarthra* Foerster, 1862, has page priority and should replace the preoccupied *Adelura*. The monobasic genotype is *Alysia apii* Curtis, 1826.

ICHNEUMONIDAE.

4. *Chaeretymma* Foerster, 1868, *Verh. naturh. Ver. Rheinl.* **25** : 187.

Cratocryptus Thomson, C. G., 1873, *Opusc. ent.* **5** : 520.

The above synonymy is quite generally known and has been adopted to a very limited extent by modern authors. The genotype of *Chaeretymma* is

designated by Viereck (1914) as *Cryptus furcator* Gravenhorst, 1829, and the same author has pointed out that *Cratocryptus* Thomson with the same genotype is a synonym.

Difficulty, however, arises in the separation of this genus from that most frequently known as *Microcryptus* Thomson (1873); in fact *M. erythrinus* (Grav.) and *M. lacteator* (Grav.) are placed in the present genus under Thomson's generic name in such a recent work as that of N. F. Meyer (1933). If this action is supported, and it may well be correct judging from the descriptions only, a further complication arises in that *M. erythrinus* (Grav.) is the monobasic genotype of *Microcryptus*, which name therefore would become another synonym of *Chaeretymma*.

I am not proposing this new synonymy here as I have not yet had an opportunity of examining specimens of *M. erythrinus*, and for the present I am leaving both the species mentioned together with the closely allied *sperator* (Grav. 1829) in the old genus *Microcryptus*. In any case recent authors use *Pezoporus* Foerster, 1868, for *Microcryptus*, but as will be seen below this name is preoccupied.

5. *Aptesis* Foerster, 1850, *Arch. Naturgesch.* **16** (1) : 71.

Pezoporus Foerster, 1868, *Verh. naturh. Ver. Rheinl.* **25** : 181, *nec* Illiger, 1811, *nec* Klug, 1842.
Microcryptus Thomson, C. G., 1873, *Opusc. ent.* **5** : 520.

Microcryptus Thomson, 1873, has *Cryptus erythrinus* Grav., 1829, for genotype and as shown above may possibly become a synonym of *Chaeretymma* Foerster, 1868. Viereck (1914) has indicated that *Pezoporus* Foerster, 1868, with the monobasic genotype *Ichneumon nigrocinctus* Grav., 1815, should in any case be used for Thomson's genus. In fact this name has received a limited recognition amongst recent authors. It is overlooked, however, that it is preoccupied by Illiger in 1811 in the Aves and by Klug in 1842 in the Coleoptera.

Aptesis Foerster, 1850, of which the genotype was selected by Viereck (1914) as *Ichneumon sudeticus* Grav., 1815, has been used as a separate genus in the days when brachyptery was regarded as a generic character and subsequently, oddly enough, it was used as a subgenus of the more recent *Microcryptus*. I propose to use the Foersterian name in place of *Microcryptus* and instead of the preoccupied *Pezoporus*, over both of which it has priority. I believe the genotype *I. sudeticus* is conspecific with *I. nigrocinctus*, the genotype of *Pezoporus*.

It should be remembered that *Aptesis* has been used by many older authors in a very loose sense to include several widely different brachypterous Cryptines, and that as now applied it will be restricted to the brachypterous *nigrocinctus* group and to the congeneric macropterous species hitherto ranged under *Microcryptus*. It may be noted in passing that brachyptery in these insects is restricted to the female sex.

6. *Agrothereutes* Foerster, 1850, *Arch. Naturgesch.* **16** (1) : 71.

Gambrus Foerster, 1868, *Verh. naturh. Ver. Rheinl.* **25** : 188.
Spilocryptus Thomson, C. G., 1873, *Opusc. ent.* **5** : 501.

It is doubtful if there is any difference of generic value between *Gambrus* and *Spilocryptus* : indeed they are often regarded as subgenera only. Viereck (1914) has designated *Pezoporus abbreviator* (Grav. 1829), which seems to be the same insect as *Ichneumon abbreviator* Fabricius, 1793, as the genotype of *Agrothereutes*. This is congeneric with *Spilocryptus hospes* (Tscheck, 1870)

(= *Spilocryptus zygaenarum* Thomson, 1873), the type of *Spilocryptus* Thomson, 1873, and *Agrothereutes* therefore has priority over Thomson's name.

7. *Exolytus* Foerster, 1858, *in* Holmgren, *Svensk. Vet.-Akad. Handl.* **15** : 328.

Mesoleptus (Gravenhorst) Viereck, 1914, *Bull. U.S. nat. Mus.* **83** : 93.

8. *Mesoleptus* Gravenhorst, 1829, *Ich. Eur.* **2** : 3.

Mesoleptidea Viereck, 1912, *Proc. ent. Soc. Washington* **14** : 176.

Viereck (1914) has pointed out that the genotype of *Mesoleptus* Gravenhorst, 1829, is *Ichneumon laevigatus* Gravenhorst, 1820, by designation of Curtis (1837). This species is also the monobasic genotype of *Exolytus* Foerster and accordingly the two names would be synonymous, the Stilpnine genus being known as *Mesoleptus* Grav. and the Tryphonine genus taking the name *Mesoleptidea* Viereck, 1912.

As *Mesoleptus* is the typical genus of the Mesoleptini and because these changes of name will cause much confusion, I consider that it would be advisable to ask the International Commission on Zoological Nomenclature to suspend the rules in this case by invalidating Curtis's selection of the genotype. Westwood (1840) selected *Mesoleptus narrator* Grav., 1829, as genotype which hardly helps matters, as this species appears to belong to another genus. The genotype of *Mesoleptidea* Viereck, 1912, which would be a synonym of *Mesoleptus* if my suggestion is followed, is *Mesoleptus cingulatus* Grav., 1829, by original designation, and this might serve as the genotype of Gravenhorst's old genus.

I might add that Curtis appears to have had no very clear idea of *Mesoleptus* and his folio (no. 644) is very confused; at least part of his generic characters are taken from his new species *Mesoleptus waltoni*, which is a synonym of *Catoglyptus fuscicornis* (Gmelin, 1790) according to Morley (1911).

9. *Lampronota* Curtis, 1832, *Brit. Entom.* **9** : 407.

Meniscus Schioedte, 1839, *Mag. de Zool.* **9** : 10.

10. *Cylloceria* Schioedte, 1838, *Rev. zool.* (*Soc. Cuv.*) : 140.

Lampronota auctt. *nec* Curtis, 1832.

There is some confusion between the names *Lampronota* Curtis, 1832, *Meniscus* Schioedte, 1839, *Cylloceria* Schioedte, 1838, and *Xenacis* Foerster, 1868. The genotype of *Lampronota* Curtis (Viereck erroneously states monobasic) is *Ichneumon setosus* Geoffroy in Fourcroy, 1785, by original designation. This species is always regarded as belonging to *Meniscus*, and congeneric with the genotype of the latter, *Ichneumon catenator* Panzer, 1804. *Meniscus* Schioedte, 1839, will therefore become a synonym of the prior *Lampronota* Curtis, 1832. Viereck (1914), who points out the above details, goes on to comment that *Lampronota* auctt. *nec* Curtis, 1832, will be replaced by *Cylloceria* Schioedte, 1838. The type of *Cylloceria* is designated by Viereck as "(*Phytodietus*) *Cylloceria caligata* (Gravenhorst) Schioedte" and his comments are therefore correct in that *Cylloceria* should replace *Lampronota* auctt. *nec* Curtis, but I think his inclusion of *Xenacis* Foerster, 1868, as a synonym of *Cylloceria* must be due to a mistake caused by the fact that Gravenhorst described three species of PIMPLINAE under the specific name of *caligatus*. One is the above-quoted *Phytodietus caligatus* Gravenhorst, 1829 (*Ich. Eur.* **2** : 936) and another is *Lissonota caligata* Grav., 1829 (*Ich. Eur.* **3** : 38). The latter is

the monobasic genotype of *Xenacis* Foerster, 1868. I have no evidence that these two references represent the same species and I therefore infer that *Xenacis* should be maintained as distinct from *Cylloceria*.

11. *Cteniscus* Haliday, 1836, in Curtis, *Guide Brit. Ins.* ed. 2 : 98, and

12. *Exenterus* Hartig, 1837, *Arch. Naturgesch.* **3** (1) : 156.

Westwood (1840) designated *Tryphon* (*Cteniscus*) *curtisii* Haliday, 1838, as the genotype of *Cteniscus* Haliday, 1836. The monobasic genotype of *Exenterus* Hartig, 1837, is *Tryphon marginatorius* Gravenhorst, 1829 (= *Ichneumon marginatorius* Fabricius, 1793). If authors are correct in placing these two species in *Exenterus*, then it follows that that genus must take the name *Cteniscus* Haliday, and *Cteniscus* of authors will require a new name in the event of the two genera being maintained as distinct.

According to Morley (1911 : 204) however (who places the two genera together under *Exenterus*), there is a prior citation by Curtis, overlooked by Viereck (1914), of *Cteniscus aurifluus* Haliday, 1838, as the genotype of *Cteniscus*.[1]

Curtis's citation retains the *status quo* undisturbed, but whether his designation can be accepted I do not know, since it was made in 1832 *prior* to the appearance of *Cteniscus* in the second edition of Curtis's *Guide* and before the genus was described by Haliday in 1838.

Personally I am inclined to regard the genus *Cteniscus* as dating from 1832 (Haliday *in* Curtis), and *C. aurifluus* Haliday is therefore the genotype by original designation.

13. *Diadegma* Foerster, 1868, *Verh. naturh. Ver. Rheinl.* **25 :** 153.

No species was included in this genus by Foerster, but in 1908 Morley placed in this genus the single new species *Diadegma anomala* Morley, 1908, which has therefore been accepted as the type of Foerster's genus. It appears, however, that a year previously (1907) Schmiedeknecht adopted *Campoplex crassicornis* Gravenhorst, 1829, as the type of this genus. Morley (1914 : 169) refers to this matter again and places *Campoplex crassicornis* Grav. in the genus *Meloboris* Holmgren, 1858. It would appear that Morley's use of the name *Diadegma* is invalid but the affinities of his insect are so doubtful that its correct placing must await further study.

14. **Eustiphrosomus** nom. nov. pro *Stiphrosomus* Foerster, 1868, *Verh. naturh. Ver. Rheinl.* **25 :** 198, *nec* Fieber, 1858.

The name *Stiphrosomus* Foerster, 1868, is preoccupied by that of Fieber, 1858, proposed for a genus of Hemiptera. I therefore propose *Eustiphrosomus* n. n. to replace the invalid name of Foerster. The genotype is *Ichneumon fuscicornis* Gmelin, 1790, by designation of Viereck (1914).

15. **Phobetellus** nom. nov. pro *Phobetus* Thomson, C. G., 1889, *Opusc. Ent.* fasc. **13 :** 1430, *nec* Leconte, 1856.

The name *Phobetus* of Thomson is preoccupied by that of Leconte proposed for a genus of Coleoptera. The name *Phobetes* Foerster, 1868, is not available

[1] Curtis 1832 : 399, "Mr. Haliday has discovered two new species [of *Tryphon*], one *T. aurifluus* (the type of his proposed subgenus *Cteniscus*) occurs on Willows from July to Sept.;"

as it appears to apply to a distinct genus defined by Davis (1897) on a single North American species (Viereck 1914). I therefore propose the name *Phobetellus* to replace that of Thomson. The genotype is *Tryphon fuscicornis* Holmgren, 1854, by designation of Viereck (1914).

16. **Ipoctoninus** nom. nov. pro *Ipoctonus* Foerster, 1868, *Verh. naturh. Ver. Rheinl.* **25** : 199, *nec* Heine, 1860.

The name *Ipoctonus* of Foerster is preoccupied by that of Heine used for a genus of Birds. Heine's name is an emendation for *Dendropicos* Malherbe, 1849, but *Opinion* 148 of the International Commission on Zoological Nomenclature rules that names are to be rejected as homonyms if predated by emendations of earlier names. I therefore propose the name *Ipoctoninus* n. n. to replace that of Foerster. The genotype is *Ichneumon chrysostomus* Gravenhorst, 1820, designated by Viereck (1914).

17. **Otlophorinus** nom. nov. pro *Otlophorus* Schmiedeknecht, 1914, *Opusc. Ich.* : 2867, *nec* Foerster, 1868.

Viereck (1914) has designated *Tryphon vepretorum* Gravenhorst, 1829, as the genotype of *Otlophorus* Foerster, and in this he appears to be correct since Thomson (1894), the first to revise Foerster's genus, included *vepretorum* under his section 6 of *Mesoleius* (*Otlophorus*). Schmiedeknecht seems to be the next author revising the group and he states that *vepretorum* should be referred to *Protarchus* Foerster, 1868. *Protarchus* has page priority and *Otlophorus* Foerster therefore becomes a synonym. Schmiedeknecht's genus is without a name, and in order to supply this deficiency I propose *Otlophorinus* n. n. and hereby select *Mesoleius pulverulentus* Holmgren, 1855, as genotype.

18. **Prospudaea** nom. nov. pro *Spudaea* Foerster, 1868, *Verh. naturh. Rheinl.* **25** : 211, *nec* Snellen, 1867.

Spudaea Foerster is invalidated by the prior use of the name by Snellen in the Lepidoptera. The emendation *Spudaeus* Thomson, 1883, of Foerster's name is antedated by *Spudaeus* Gistl, 1848, and *Spudaeus* Dallas, 1851. I therefore propose *Prospudaea* n. n. to take the place of Foerster's name. The monobasic genotype is cited as *Trematopygus* (*Spudaea*) *clypearis* Brischke, 1888, by Viereck (1914).

19. *Therion* Curtis, 1829–30, *Guide Brit. Ins.* (4) : 101.

Therion Curtis, 1839, *Brit. Entom.* **16** : 736.
Exochilum Wesmael, 1849, *Bull. Acad. Roy. Bruxelles* **16** (2) : 119.

I do not know why Viereck (1914) and other authors have given preference to Wesmael's name when *Therion* Curtis, clearly has priority. The two genera are isogenotypic, having *Ichneumon circumflexus* Linnaeus, 1758, for type, by designation of Curtis (1839) in the case of *Therion*. The genus *Exochilum* is monobasic. In my opinion *Therion* Curtis, should be reinstated.

20. *Anomalon* Jurine, 1807, *N. Méth. class. Hyménopt.* : 114.

Paranomalon Viereck, 1912, *Proc. ent. Soc. Wash.* **14** : 175.

Anomalon is the typical genus of the Anomalonini. According to Viereck (1914) the genotype is *Ichneumon laetatorius* Fabricius, 1781, and the genus is therefore identified with *Bassus* auctt. *nec* Fabricius [1804–5]. If this were

accepted, the genus would be isogenotypic with, and take precedence over, *Diplazon* Nees, 1818. The group or subfamily name based on *Diplazon* would also be replaced. Gravenhorst (1829) used the name *Anomalon* in an entirely different sense and has been followed by almost all authors. In my view considerable inconvenience and confusion would be avoided by retaining *Anomalon* in Gravenhorst's sense. The designation of *Ichneumon laetatorius* as genotype was made by Curtis (1828), the first to divide Jurine's composite genus, and *Anomalon* can only be retained as understood by Gravenhorst (1829) if the International Commission agree to use their plenary powers to that effect.

Paranomalon Viereck, 1912, was proposed to replace *Anomalon* auctt. *nec* Jurine.

21. *Campoplex* Gravenhorst, 1829, *Ich. Eur.* **3** : 453.

Campoplegidea Viereck, 1912, *Proc. U.S. nat. Mus.* **42** : 633.

Westwood (1840) designated "*C. difformis* Gr." as the genotype of *Campoplex*. Gravenhorst's *difformis* appears to have been a composite species, but at least part of his description applies to *Ichneumon difformis* Gmelin, 1790, which led Viereck (1914) to cite the genotype as (*Ichneumon*) *Campoplex difformis* (Gmelin) Gravenhorst. *Angitia rufipes* Gravenhorst, 1829, appears also to be partly included with *difformis* by Gravenhorst.

Ichneumon difformis is usually placed in the genus *Omorga* Thomson, 1887 (= *Omorgus* Foerster, 1868, *nec* Erichson, 1847) and Viereck therefore states that *Campoplex* Grav. [= *Omorgus* (Foerster) Thomson]. Meyer (1935) has recently treated *difformis* as belonging to *Eulimneria* Schmiedeknecht, 1907 (= *Limneria* Thomson, 1887, *nec* Adams, 1851, *nec* Holmgren, 1858). Should this position be correct, it would be necessary to replace *Eulimneria* by *Campoplex*.

Since Viereck (1912) has designated *Limneria mutabilis* Holmgren, 1858, as the genotype of *Omorgus* Foerster, 1868, and if the position of this species as a *Eulimneria* as indicated by Meyer is correct, then on the basis of its genotype also *Omorga* (*Omorgus* Fst.) becomes a synonym of *Campoplex* Grav.

Campoplegidea was proposed by Viereck (1912) to take the place of *Campoplex* auctt. *nec* Grav., but it seems very necessary that before this can be adopted these genera of the Campoplegini should be re-examined in respect to the various genotypes proposed.

In my opinion Westwood's designation of Gravenhorst's *difformis* should be rejected on account of its composite nature, and as Viereck's citation of *Campoplex oxyacanthae* Boie., 1855, as the genotype of *Campoplegidea* represents a species not originally included in *Campoplex*, it should also be rejected in favour of a new designation which would preserve this well-known genus *Campoplex* as usually understood.

22. **Sagaritopsis** nom. nov. pro *Sagaritis* Holmgren, 1858, *K. svenska Vetensk. Akad. Handl.* **2** (8) : 43, *nec* Huebner, [1821].

The generic name *Sagaritis* Holmgren, is preoccupied by that of Huebner used for a Lepidopterous genus. I therefore propose the name *Sagaritopsis* n. n. to replace that of Holmgren. The genotype is *Campoplex declinator* Gravenhorst, 1829 = *Ichneumon dilatator* Thunberg, 1822, by original designation.

23. *Absyrtus* Holmgren, 1858, *K. svenska Vetensk. Akad. Handl.* **2** : 32.

This name has been previously used by Rafinesque in 1815, but since the latter appears to be a *nomen nudum* it will not be necessary to replace Holmgren's name. The emendation *Absyrtes* proposed by Brischke in 1880 is invalid and the name has in any case been previously used by Guenée in 1857.

24. *Porizon* Fallén, 1813, *Spec. nov. Hymenopt.* (2) : 18.

Thersilochus Holmgren, 1858, *K. svenska Vetensk. Akad. Handl.* **2** (8) : 135.

The monobasic genotype of *Porizon* is *Ichneumon moderator* Linnaeus, 1758, according to Viereck (1914), and this species being a species of *Thersilochus*, it becomes necessary to replace that genus by *Porizon*. *Porizon* auctt. *nec* Fallén was renamed *Porizonidea* by Viereck (1914).

I am personally inclined to accept the position required by the application of the rules and not to ask the Commission to use their plenary powers in this case, since both genera belong to the same group, the Porizonini, and the changes involve little inconvenience.

EURYTOMIDAE.

25. *Eudecatoma* Ashmead, 1888, *Ent. Amer.* **4** : 42.

Decatoma auctt. *nec* Spinola, 1811, *Ann. Mus. Hist. nat.* (*Paris*) **17** : 151.

In 1904 Ashmead designated *Chrysis adonidum* Rossi, 1790, as the genotype of *Decatoma* Spinola. Dalla Torre (1898) places this species as a synonym of *Eurytoma aterrima* (Schrank, 1781). If the specific synonymy is correct, *Decatoma* Spinola becomes a synonym of *Eurytoma* Illiger, 1807, to which genus *aterrima* now belongs. *Decatoma* as understood by modern authors will thus require another name. Balduf (1932, *Proc. U.S. nat. Mus.* **79**, art. 28 : 4) revised the North American species of the genus but failed to notice this matter. The only synonym of *Decatoma* he mentions is *Eudecatoma* Ashmead, and this is available to replace *Decatoma* of authors.

The genotype of Ashmead's genus is the American *Decatoma batatoides* Ashmead—monobasic, through subsequent reference, according to Gahan and Fagan (1923).

ENCYRTIDAE.

26. **Mayrencyrtus** nom. nov. pro *Liothorax* Mayr, 1875, *Verh. zool. bot. Wien* **25** : 728, *nec* Motschulsky, 1860.

Liothorax Mayr is preoccupied by *Liothorax* Motschulsky proposed in 1860 for a genus of Coleoptera. I therefore propose *Mayrencyrtus* n. n. to replace the invalid name of Mayr. The monobasic genotype is *Encyrtus glaphyra* Walker, 1837.

PTEROMALIDAE.

27. **Euamblymerus** nom. nov. pro *Amblymerus* Walker, 1834, *Ent. Mag.* **2** : 303 (*partim*).

The genotype of *Amblymerus* Walker, 1834, is *A. amoenus* Walker, 1834, by designation of Westwood (1840). Unfortunately *Eutelus dilectus* Walker, 1834, is the genotype of *Eutelus* Walker, 1834, by designation of the same author and this species is a synonym of *Amblymerus amoenus*. The transfer of *amoenus*

to *Eutelus* (to which genus it appears to belong) as the valid name for *E. dilectus* will necessitate the use of *Amblymerus* in place of *Eutelus* and the substitution of *Euamblymerus* n. n. for *Amblymerus* Walker, *partim*.

Ashmead (1904) overlooked Westwood's citation of the genotype of *Amblymerus* and designated *Amblymerus dubius* Walker, 1834, which may be accepted as the genotype of the present genus.

28. **Neopolycelis** nom. nov. pro *Polycelis* Thomson, C. G., 1878, *Hym. Scandin.* **5** : 143, *nec* Ehrenberg, 1831.

Polycelis is already in use by Ehrenberg, 1831, for a genus of Vermes. The emendation of Ashmead proposed in 1894 to *Polyscelis* and adopted by Dalla Torre (1898) is also preoccupied by the emendation of Ehrenberg's name proposed by Girard in 1850. I therefore suggest the name *Neopolycelis* n. n. to replace that of Thomson.

The genotype is *Pteromalus conspersus* Walker, 1835.

Mymaridae.

29. *Mymar* Curtis, 1832, *Brit. Entom.* **9** : 411.

The name *Mymar* first appeared in Curtis's *Guide* (4) (1829–30 : 112) as *Mymar* Hal[iday]. Haliday described it in 1833, but Curtis had previously (1832) described and figured the genus and listed 20 species. The list was stated to be based on Walker's notes, but the description of the genus is undoubtedly Curtis's own work and it should be credited to him rather than to Haliday (who probably first recognised it), Walker, or Walker *in* Curtis, as is done by various authors.

Curtis designated *Ichneumon punctum* Shaw, 1798, as the genotype, and subsequently Westwood (1840) cited *Mymar pulchellus* Curtis, 1832, as the type. If Curtis's prior selection were accepted, *Mymar* would have to be used instead of *Anaphes* Haliday, 1833, which is isogenotypic with it, having *I. punctum* as its genotype. This synonymy is adopted by Gahan and Fagan (1923). Thus the genus *Mymar* of authors would require another name, perhaps either *Flabrinus* Rondani, 1877, or *Mymarilla* Westwood, 1879, being substituted for it. However, Curtis, in describing the genus *Mymar*, also figured and described *M. pulchellus* Curtis, and he states underneath his generic description " Obs. The dissections and descriptions are taken from the species figured ", I therefore consider, since *Ichneumon punctum* does not belong to the same genus as *M. pulchellus* on which Curtis based his generic diagnosis, being described as an *Anaphes* by Haliday in 1833, that Curtis was incorrect in selecting Shaw's species as the genotype of his genus. Westwood's designation of *M. pulchellus* is therefore valid and should be followed as hitherto.

Platygasteridae.

30. **Ectadius gynomamertes** nom. nov.

Platygaster mamertes Walker, 1835, *Ent. Mag.* **3** : 227, female only.

In 1835 Walker described *Platygaster mamertes* from male specimens taken by himself and Haliday. He also added the description of a female taken by Haliday which he doubtfully associated with this species.

The male was transferred to *Synopeas* Foerster, 1856, by Marshall (1873, *Cat. Brit. Hymenopt. Oxyura* : 19) and the female was also doubtfully referred

to the same position. Kieffer (1926) retained the male in *Synopeas* but placed the female in *Ectadius* Foerster, 1856, using the specific name *mamertes* Walker for both species.

In following Kieffer's arrangement it will be necessary to rename the female placed in *Ectadius* and I therefore propose the name *gynomamertes* n. n. for *Platygaster mamertes* Walker, 1835, ♀, *nec* ♂.

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A NOTE ON THE GENUS *NOTIOTHEMIS* RIS, WITH THE DESCRIPTION OF A NEW SPECIES (ORDER ODONATA)

By Lt.-Col. F. C. Fraser, I.M.S. Retd., F.R.E.S.

Among a small series of specimens representing species belonging to the subfamily Tetratheminae (family Libellulidae), collected by Professor G. D. Hale Carpenter in Uganda during the year 1928, are three belonging to the little known genus *Notiothemis* Ris. One of these is a variety of *N. jonesi*, the genotype, whilst the other two belong to a new species. In describing these, I have been greatly assisted by the loan of a typical male of *N. jonesi* Ris from Mr. J. E. H. Robert's collection of Odonata.

Notiothemis jonesi Ris.

Notiothemis jonesi Ris, 1916, *Cat. Coll. Selys* **16** : 1054, fig. 613.
Ris, 1920, *Ann. S. African Mus.* **18** : 390.

Our knowledge of the genus *Notiothemis* has up to the present been restricted to four males of *N. jonesi* Ris :—the *type* from Balwa, Usambara, in the Morton collection now housed in the Royal Scottish Museum; a male from Eldoret, East Africa, viii.13; and two males from M'Fongosi, Zululand, all in the South African Museum. To these I am now able to add two more males, one of which is a well-marked variety, whilst the other is typical save for some minor venational differences. This latter specimen is from Homa Pt, Kavirondo, Lake Victoria, vii.28, coll. Wilkinson, and shows some deformity of the venation in the left fore-wing, where Riii and IRiii are fused for their distal halves and a supplementary vein to the Bridge is present, resulting evidently from this deformity. Other details of the venation are as follows :—nodal index $\frac{7\text{–}10 \mid 8\text{–}7}{7\text{ –}8 \mid 8\text{–}7}$; hypertrigones traversed once in the fore-wings, free in the hind; anal-loop made up of 8 cells in both hind-wings; discoidal cell of right fore-wing normal, that of the left four-sided as in *Tetrathemis*.

Notiothemis jonesi var. **auricolor** var. n. (fig. 2, a).

Male. Abdomen 21 mm. Hind-wing 24 mm.

Differs from type by the greatly restricted dark markings on the thorax and legs : this character is not due to a teneral condition as might be suspected, for the insect is actually an elderly adult with the wings becoming palely infuscated from age.

Head and prothorax similar to type; thorax bright citron yellow on dorsum, pea-green on the sides, marked with reddish-brown and dark blackish-brown as follows :—a blackish-brown quadrate spot of moderate size on middorsum situated at the junction of the upper and middle thirds and falling just short of the antealar sinus, the yellow middorsal carina bisecting it finely; a narrow reddish-brown to ferruginous antehumeral stripe broad below but tapering above to a fine point which ends at about the level of the middle of the quadrate spot but without becoming confluent with it; a narrow blackish-brown posthumeral stripe, broadest above where it sends a fine prolongation inwards bordering the antealar sinus but not quite extending to middorsal carina, the yellow here becoming confluent with the yellow of antealar sinus; this stripe very sinuous or crenulate in outline and bordered obscurely behind by brownish which fades into the green ground-colour. A median lateral

stripe commencing below the hind-wing axillary and running downwards over the spiracle at which point it expands to include that organ. Both stripes continued below under the thorax to meet their fellows from the opposite side. Finally the extreme posterior angle of

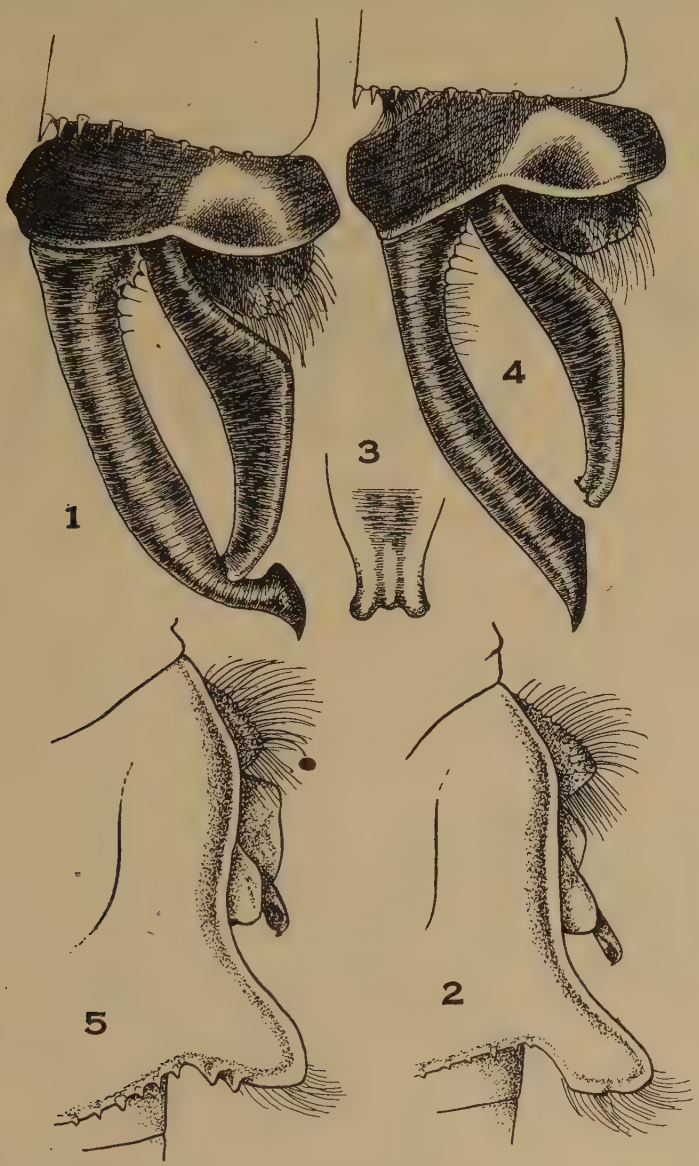

FIG. 1.—1. Anal appendages of *Notiothemis jonesi* Ris, male, seen from the right side. 2. Genitalia of same. 3. Apex of inferior anal appendage, ventral view. 4. Anal appendages of *Notiothemis robertsi* sp. n., seen from the right side. 5. Genitalia of same.

the metepimeron blackish-brown. Legs black, femora greenish-yellow on their inner sides. Venation :—Anal-loop made up of 6 and 8 cells in the hind-wings, hypertrigones of fore-wings traversed once in fore-wings, free in the hind, CuP well separated from the hinder

angle of discoidal cell in hind-wing, discoidal cells normal in fore-wing, but with costal side not recessed as it is in the type and other specimens examined. Nodal index $\frac{8-9 \mid 9-8}{9-8 \mid 8-9}$: 2 Cuq in the hind-wings : no supplementary veins to Bridge.

Habitat : UGANDA : Fort Portal, Western Province, 3.xii.27, coll. G. D. Hale Carpenter (alt. *c.* 5000 ft.).

In addition to the greater extent of the pale ground-colour, this variety differs from type by the normal character of the discoidal cell in the hind-wing. *Type* will be deposited in the British Museum (Natural History).

FIG. 2.—Thoracic dorsal markings of :—a. *Notiothemis jonesi* var. *auricolor* var. n. b. *Notiothemis jonesi* Ris, typica. c. *Notiothemis robertsi* sp. n.

Notiothemis robertsi sp. n. (figs. 1, 4 and 5, 2, c).

Male. Abdomen 20–22 mm. Hind-wing 23–25 mm.

Head with labium bright ochreous, the middle lobe and the borders of the lateral lobes narrowly black; labrum glossy steely blue-black, face and frons pale bluish-green (pale turquoise blue) with two transversely oval slightly metallic blackish spots and a broad sharply limited blue-black basal stripe on the front and upper parts of frons respectively, vesicle metallic blue-black, occiput dark reddish-brown; behind eyes steely blue-black. Prothorax pale greenish with the sutures and border of posterior lobe narrowly clouded with reddish-brown. Thorax pea-green marked with dark blackish-brown as follows :— moderately broad antehumeral stripes meeting at a point just short of the antealar sinus and diverging slightly below so as to enclose a long narrow yellow triangle of the ground colour with its apex directed upwards, 3 lateral stripes of even thickness, the first post-humeral, with very sinuous or crenulate anterior border and with its upper end prolonged finely medially along the lower border of antealar sinus, which is itself narrowly outlined in black; a second stripe running obliquely downwards from the axillary of the hind-wing and crossing the spiracle; finally a vestigial stripe on the posterior angle of the metepimeron. The two former stripes descending to lower part of thorax and passing across the pectus to meet their fellows from the opposite side. Legs black save for the inner side of the anterior femora which are greenish-yellow. Armature and claw-hooks as for genus. Wings hyaline, palely tinted with yellow at extreme bases especially in the subcostal and cubital spaces; pterostigma rather short and broad, covering 2 cells, narrowing slightly distally, dark reddish-brown in colour; no supplementary veins to Bridge; nodal index $\frac{9-10 \mid 11-8}{9-9 \mid 8-9}$, $\frac{7-9 \mid 9-9}{8-8 \mid 8-7}$; 1 cubital cross vein (Cuq) in fore-wings, 3 in the hind; anal-loop made up of 6 to 7 cells; CuP slightly separated from the lower angle of discoidal cell in hind-wing; base of discoidal cell in hind-wing well distal of arculus; discoidal cells of fore-wings normal in shape, that of hind-wings with costal side recessed as in *N. jonesi*; hypertrigones traversed once

in all wings; 3 rows of cells between the anal-loop and base of wing. Abdomen black marked with greenish-yellow as follows:—the sides of segments 1 and 2 and basal three-fourths of 3 rather broadly, tapering posteriorly on the latter segment and finely interrupted by the transverse carina. The dorsum of segment 2 with subapical and subbasal transverse yellow stripes which are connected with the lateral yellow areas: on segment 3 the lateral yellow continued basally over dorsum to meet this colour on the opposite side; segments 4 to 6 with lateral yellow stripes similar to those on 3 but becoming shorter and shorter from segment to segment and vestigial on segment 6: segment 7 wholly bright yellow save for a narrow apical black ring; segments 8 to 10 wholly black. Anal appendages black: superiors nearly three times as long as segment 10, broad at base which is minutely spined along its outer lower border, then narrowing, cylindrical to the end which ends in an acute point and bears an obtuse point below subapically. Inferior appendage about one-fifth shorter, triangular, curved gently upwards to its apex, which is truncate and shallowly notched. Genitalia of second segment very similar to that of *N. jonesi*, differing chiefly by the shape of the lobe, which is broader, less sharply pointed, obtusely angulated to body axis and bears 3 or 4 robust spines on its free posterior border.

Habitat: Uganda, shores of Lake Victoria during July–August, collected by G. D. Hale Carpenter. The *type* will be deposited in the British Museum (Natural History).

This new species differs from *jonesi* in the following points:—Dorsal marking of thorax, steely black labrum (pale green in *jonesi*), 3 Cuqs in hind-wing (2 only in *jonesi*), all hypertrigones traversed (only those of fore-wings in *jonesi*), base of discoidal cell of hind-wing distal to arculus, shape of anal appendages etc.

The venational differences between *jonesi* and this new species call for some amendments in the definition of the genus *Notiothemis* as follows:—Base of discoidal cell in hind-wing at the level of or considerably distal to the arculus: 2 to 3 Cuqs in hind-wings; anal-loop made up of 6 to 10 cells: discoidal cell of fore-wing normal in shape or, more rarely, 4-sided, that of hind-wing normal or with the costal side recessed. This new species is named after Mr. J. E. H. Roberts in acknowledgment of much helpful criticism and loans of material and literature.

The extreme variability of the venation found in all of these supposedly archaic forms and the frequent occurrence of a four-sided discoidal cell simulating that found in the Anisozygoptera is a matter for consideration. It might be thought that insects of such antiquity would have long ago arrived at a state in which the venation is fully crystallised. That it is not so, or appears to be not so, is, I believe, due to a process of degeneration which one would expect to meet in types approaching extinction, and what is actually exhibited in their venation is a reversion to an older archaic type.

AN ILLUSTRATED CATALOGUE OF THE PALEARCTIC *MELITAEA* (LEP. RHOPALOCERA): ERRATA

By L. G. Higgins, M.A., F.R.C.S., F.R.E.S.

Since the publication of "An illustrated catalogue of the palearctic *Melitaea*" in 1941 (*Trans. R. ent. Soc. Lond.* **91**: 175–365) several mistakes have become obvious. I am grateful to various friends who have helped to make corrections, including Colonel H. D. Peile, Mr. E. P. Wiltshire and Mr. Francis Hemming. There is one serious error which affects the nomenclature of *M. diamina* Lang. I must accept responsibility for this mistake, and my only excuse is the difficulty in 1941 of checking the original reference in Ernst and Engramelle. Unfortunately the page of reference is missing in my copy, and at that time most books of this character had been removed from London and were difficult to consult. The correct nomenclature is now shown, and I hope that nothing has been published during the interval which will repeat my original mistake.

A somewhat longer list of addenda, including the description of an undescribed form discovered by Mr. Wiltshire, must await publication until more space is available.

Errata.

Page

188. Map 7. *Melitaea consulis* (c) should be placed in southern Iran and not in Arabia.
191. Line 13. For "*Melitaea turcmanica* Higgins" read "*turkmanica*".
204. Line 41. For "1871" read "1870".
216. Line 44. For "*ignaea*" read "*ignea*" Verity.
217. Line 9. For "*ignaea*" read "*ignea*" Verity.
221. Lines 37 and 39. For "*siberica* Heyne" read "*sibirica*". (Correction of spelling.)
224. *Melitaea persea* heading, after fig. 6 ♂ insert fig. 10 ♀.
226. Line 21. For "female" read "male".
227. Line 16. Zawita and Rayat are in Iraqi Kurdistan and not in Syria.
Melitaea persea caucasica Stgr. Insert as synonym:—*Mel. didyma* var. *kaschtschenkoi* Christoph, 1889, *Ent. Nachricht.* **15**: 69. (See also page 217.)
230. Line 20. After "Syria" add: Bscharre, Nord Libanon, Kanisah.
233. *Melitaea deserticola* Obth. After Loc. Algeria add Biskra.
239. *Melitaea didymina* mod. *perplexa*. Lines 1 and 2 of description should read:—"I have only one specimen, a female, which differs from typical *didymina* in the constant development. . . ."
241. *Melitaea didymoides* mod. *latonia* after *seitzi* Matsumura, 1929, *Ill. Comm. Ins. Japan* add "List". After *eupatides* Fruhst., 1916, add [1917].
242. Line 8. For "*P. didymoides*" read "*M. didymoides*" and next line for the date "1906" read "1908".
244. *Melitaea ala bicolor* Seitz, for the date "1907" read "1908".
245. *Melitaea pseudoala* Shelj. The reference should read as follows:—1929, *Mitth. Münch. ent. Ges.* **19**: 355. (Correction of date and volume.)

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248. *Melitaea chitralensis cnarea* Fruhst. after 1916 add [1917].

250. *Melitaea sutschana* Stgr. add as synonym:—*Mel. didyma* var. *sibirica* Hoppf. (in litt.) 1893 *in* Ruhl-Heyne, *Pal. Grossschmett.*: 394. Loc. Southern Amur.

269. Line 33. *Melitaea robertsi* Butl. For locality "Baluchistan" read Kandahar".

271. Legend for fig. 125. For "lateral view" read "dorsal view".

277. Line 25. For "Dixful Mountains" read "Dizful Mountains".

285. *M. cinxia tchujaca* Seitz, for "1909" read "1908".

293. Lines 1 and 2. For "*elizabethae*" read "*elisabethae*".

302. Line 4. For "species" read "form".
Line 7 for "Stgr." read "Elwes".

312. *Melitaea diamina* Lang. Mr. Hemming has pointed out that the locality cited by Ernst for the figure of Lang's *diamina* is Vienna. It is clear, therefore, that the application of the name *diamina* Lang to the pale race of the south-western Alps involves a serious error. Although the figure in question shows a pale underside, and it may be drawn from a faded specimen, it must belong to the central European race. The name *diamina* Lang must be used for this race in place of *hebe* Borkhausen, and the latter may be treated as a true synonym, while Fruhstorfer's *alpestris* is available for the pale mountain race of the south-west. Unfortunately this involves fundamental changes in the nomenclature, as the central European race will become the typical subspecies, with Vienna as the locality of the type.

The nomenclature and synonymy of the Catalogue are to be corrected as follows:—

1. *Melitaea diamina* Lang. The central European race, with the underside relatively dark.
   Pap. diamina Lang, 1789. Loc. Vienna.
   Pap. dictynna Esp. 1777 *nec Pap. dictynna* W.V. 1775.
   Pap. hebe Borkh. 1793 nom. nov. pro *Pap. dictynna* Esp. preocc. etc.
   orientalpestris Verity and *aurelita* Fruhst. (*wheeleri* Chapm.) are to be treated as modifications of this subspecies.
2. *Mel. diamina alpestris* Fruhst. The mountain form of south-western Europe with pale underside.
   M. diamina alpestris Fruhst. 1917. Loc. Southern Switzerland.
   vernetensis Rondou is to be treated as a modification of this subspecies.

318. *Melitaea diamina* mod. *wheeleri* Chapman. Delete "*wheeleri* Chapm." and insert "*aurelita* Fruhst." For the reference following read:—*M. dictynna* var. *wheeleri* Chapman, 1910, *nec Melitaea wheeleri* Hy. Edwards, 1881, *Papilio* **1**: 52.

334. Heading *Melitaea phoebe* mod. *changaica* Seitz, Pl. 14, delete fig. 9 ♀. In reference, for the date "1909" read "1908".

339. *alatauica*. Lines 2 and 3. Delete the sentence "Probably referable to *sibina*" and insert:—Some of the black discal spots on the under surface of the hind-wing are represented by striae. There are two specimens of this form in the British Museum, and it may be regarded as *forma alicujus loci*.
alternans. In reference for the date "1909" read "1908".

Page

340. *M. phoebe gerinia* Fruhst. after the date 1916 insert [1917].
Line 40. For "*menelik* Higgins" read "*gaisericus* Hemming".

342. Line 36. For "*tartara*" read "*tatara*".
M. phoebe tungana Seitz, for "1909" read "1908".
M. phoebe tungusa Herz, after the date 1898 insert [1899].

346. Line 22, heading. For "*algerica* Ruhl" read "*algirica* Heyne", and correct spelling in the following text.

347. *Melitaea sibina* Alpheraky heading, Plate 15, fig. 6 for "♂" read "♀".

351. Legend below figures. For "*turcmanica*" read "*turkmanica* Higgins".

352. Lines 1, 2 and 3 should read :—The rest of the fore-wing not unlike that of *phoebe*. On the hind-wing the median band consists of a complete series of heavy black spots.
Lines 13 and 16. For "olive-fuscous" read "olive-sulphur".

354. Line 6. For "Kuh-Deeshk" read "Sineh Safid" by Brandt.

356. Legend to Plate 4 fig. 8. For "paratype" read "type". This specimen is now in the British Museum (Nat. Hist.).

360. Legend to Plate 14 fig. 8. For "*mandarina* Bang-Haas" read "*mandarina* Seitz".

363. Index. Add :—*microtauricus* Belter (*persea*), 226.

A NOTE ON THE IDENTITY OF CERTAIN TACHINIDAE (DIPT.)

By J. C. M. Gardner, F.R.E.S.

In 1940, *Indian Forest Records* (n.s.) *Ent.* **6** (7), I described (: 238) a puparium as that of *Sturmia atropivora* R.-D., the associated adult having been so identified by Dr. Baranoff. Owing to a suspicion that *S. chatterjeei* Curran might be a synonym of *S. atropivora*, I asked Mr. A. H. Khan to look into the matter. His opinion is that the specimen seen by Baranoff is identical with other specimens determined by the same authority as *Bactromyia fransseni* Bar.[1]; the puparia also appear to be identical. The puparium described (No. 15) is therefore not of *S. atropivora* but of *B. fransseni*, which parasitises *Margaronia laticostalis* Guénee but not Sphingidae.

Curran (1933, *Stylops* **2** : 46) described *Sturmia chatterjeei* from eight specimens from a series of fifty-two that emerged from one Sphingid larva. I have sent examples from this series to Dr. van Emden, and in his opinion *chatterjeei* Curran and *atropivora* R.-D. are conspecific.[2]

In the paper cited above, I pointed out (: 241) that two kinds of puparia (27A, 27B) were associated with adults identified by Baranoff as *Sturmia sericariae* Corn. Dr. van Emden has kindly examined the adults and pronounces those from my puparia 27B to be *Sturmia jacobsoni* Towns.

[1] Mr. Gardner has sent me the specimen in order to obtain my view on it. The *Carcelia*-like head with glabrous eyes, the 1–1–1 sternopleurals, the 3–4 setulae at the base of r_{4+5}, the narrow black vittae of the mesonotum, etc., make it quite certain that this is *Bactromyia fransseni* Bar., and that the identification by Dr. Baranoff as *Sturmia atropivora* must be due to an error in labelling the specimen. It was a unique specimen and the only fly thus identified in the collection concerned, and it was named in 1938, several years after *B. fransseni* had been described (F. v. Emden).

[2] The male genitalia of specimens of *chatterjeei* sent by Mr. Gardner, paratype of *masakensis* Curran (1927, *Bull. ent. Res.* **18** : 117), *atropivora* (Baranoff det.) with one anterodorsal seta on the mid tibiae, from Kuala Lumpur, and *atropivora* (Villeneuve det.) with two anterodorsals, from Cairo, are identical. From Cairo a fairly large series of *atropivora* is at hand, and though the majority have two anterodorsals, several specimens have only one on one or both middle legs. On the other hand, all the specimens in the British Museum (Natural History) from Ceylon, Mandalay, and Dehra Dun (named *atropivora* by Baranoff, Sir Guy Marshall and myself) have only one seta, the only specimen from Pusa two, and four of the six specimens from Malaya one. Specimens with the latter character are thus apparently much more common in the Oriental than in the Palaeartic region (F. v. Emden).

Book Notice.

A classification of the larvae and adults of the genus *Phyllophaga* (Coleoptera : Scarabaeidae). By A. G. Böving (*Mem. ent. Soc. Wash.* **2** : 1–96, text illust.). 8vo. Washington, 1942.

The main problem of the investigation dealt with in this book is an enquiry into whether or not in a large genus of beetles the specific classification of the adults and of the larvae will coincide, notwithstanding the fact that the two classifications are based on entirely different structural characters.

The result has proved that the classification of the larva of *Phyllophaga* and that of the adults does agree.

The work is in sections entitled :

I. The external morphology of the larvae of *Phyllophaga*.
II. Classification of the tribe Melolonthini on larval characters.
III. Diagnosis of the genus *Phyllophaga* by larval characters.
IV. Classification of species of *Phyllophaga* by larval characters.
V. Classification of groups of species of *Phyllophaga* by adult characters.
VI. Classification of groups of species of *Phyllophaga* by association of larval and adult characters.

A glossary of terms and a list of the literature quoted is given at the end. Following the text is a series of figures printed on pages 74–95 and arranged to form 11 plates.

An interesting feature of the descriptions of the larval stages is the selection of a "typical sample" from the material studied, and full details of such specimens is given. Most of the material is in the United States National Museum.

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——. 1936, New species of Coccidae. *Trans. R. ent. Soc. Lond.* **84** : 901–936.

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„ November 1
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„ February 7

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